

IN THE CLAIMS:

Please cancel Claims 7 and 11 without prejudice or disclaimer of subject matter. Please amend Claims 1 to 6, 8 and 10 as shown below, and add new Claims 12 to 15 as shown below. The claims, as currently pending in the application, read as follows:

1. (Currently Amended) An inspection apparatus comprising:
a substrate having integrated therein a structure for holding an inspected object;

an electromagnetic terahertz wave transmitting portion having an antenna structure for irradiating the inspected object with an electromagnetic terahertz wave; and

an electromagnetic terahertz wave receiving portion having an antenna structure for receiving the electromagnetic terahertz wave,

wherein the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion are disposed in contact with the substrate.
2. (Currently Amended) The inspection apparatus according to claim 1, wherein an electromagnetic terahertz wave generated in the electromagnetic terahertz wave transmitting portion propagates through the substrate, and the electromagnetic terahertz wave receiving portion receives an electromagnetic terahertz wave which is changed when the inspected object is disposed in an electromagnetic wave propagation path.

3. (Currently Amended) The inspection apparatus according to claim 1, wherein the structure for holding the inspected object comprises a plurality of portions for holding the inspected object, periodically disposed to form a resonant structure.

4. (Currently Amended) The inspection apparatus according to claim 1, wherein at least one of the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion comprises a negative resistance element.

5. (Currently Amended) The inspection apparatus according to claim 1, wherein at least one of the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion is connected to a high frequency circuit via a waveguide, for allowing an electromagnetic terahertz wave to propagate therethrough.

6. (Currently Amended) The inspection apparatus according to claim 1, wherein each of the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion ~~have a common structure and have~~ has both a function of transmitting an electromagnetic terahertz wave and a function of receiving an electromagnetic terahertz wave.

7. (Cancelled).

8. (Currently Amended) The inspection apparatus according to claim 1, further comprising:

generation means for allowing the electromagnetic terahertz wave transmitting portion to generate an electromagnetic terahertz wave of a desired frequency band;

detection means for allowing the electromagnetic terahertz wave receiving portion to detect an electromagnetic terahertz wave propagated through the substrate;

a database for preliminarily storing physical characteristics of the inspected object; and

an analyzing portion for collating an information to an electromagnetic terahertz wave detected by the detection means with an information stored in the database to inspect the inspected object.

9. (Original) The inspection apparatus according to claim 8, wherein the generation means is a laser oscillator.

10. (Currently Amended) The inspection apparatus according to claim 1, wherein the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion are formed along a direction perpendicular to a thickness direction of the substrate.

11. (Cancelled).

12. (New) The inspection apparatus according to claim 1, wherein the structure extends from one end of the substrate to the other end of the substrate, parallel to the surface of the substrate.

13. (New) The inspection apparatus according to claim 1, further comprising an inspected object insertion means for inserting the inspected object from outside into the structure.

14. (New) The inspection apparatus according to claim 1, wherein the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion are disposed to face each other with the substrate therebetween, and are in contact with the substrate.

15. (New) An inspection apparatus comprising:

- a substrate having integrated therein a structure for holding an inspected object;
- an electromagnetic terahertz wave transmitting portion having an antenna structure for irradiating the inspected object with an electromagnetic terahertz wave;
- an electromagnetic terahertz wave receiving portion having an antenna structure for receiving the electromagnetic terahertz wave; and
- an inspected object insertion means for inserting the inspected object from outside the structure,

wherein the electromagnetic terahertz wave transmitting portion and the electromagnetic terahertz wave receiving portion are disposed to face each other with the substrate therebetween, and are in contact with the substrate.